

**ABSTRACT OF THE DISCLOSURE**

A modulator-amplifier configured for use in parametric sound reproduction systems, including an input configured for receiving at least one input signal, a reference signal generator configured for generating a reference signal, and a comparator stage coupled to the input and the reference signal generator, the comparator stage configured for detecting relationships between a first signal based on the input signal and the reference signal. A switching power stage coupled to the comparator is configured to receive a second signal derived from a combination of an output from the comparators and the input signal, wherein there is a non-linear relationship between the input signal and the timing of state transitions in the switching power stage for the purpose of generating an output that has been shifted in frequency relative to a frequency of the input signal, and which includes at least one sideband.

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